What is claimed is:

1. A projectile comprising a gas seal, wad absorption zone, a core hull, a mass of projectile core particles within the hull and an actuator member, said actuator member being releasably fixed to the hull and having at least one stem member, said at least one stem member projecting into said mass of projectile core particles, said actuator member being at the impact end of said hull and said absorption zone being upstream of said core particles.

2. The projectile of claim 1, wherein said hull is a soft plastic that is characterized by peeling back on itself on impact, thereby releasing said mass of core particles.

3. The projectile of claim 1, wherein each of said core particles have a diameter substantially in the range from about .02 of an inch to about .13 of an inch.

4. The method of impacting a target with a projectile, said projectile comprising a gas seal, wad absorption zone, a core hull, a mass of projectile core particles within the hull and an actuator, said actuator being releasably fixed to the hull, said actuator being at the impact end of said hull and said absorption zone being upstream of said core particles, comprising the steps of firing said projectile at a target, impacting a target with said projectile, generating a pressure wave in advance of said projectile, peeling said hull backward upon itself and releasing said radial dispersion control member and said mass of projectile core particles, said radial dispersion control member initially maintaining said projectile core particles in a confined zone, within said confined zone said mass of projectile core particles having an impact effect substantially equivalent to that of a unitary projectile, thereafter

dispersing said projectile core particles in an progressively expanding pattern such that the particles travel as substantially discrete individual particles and upon impact with a secondary target produce a plurality of individual impacts.

5. The method of claim 4, wherein said core particles substantially start passing said radial dispersion after traveling at least about six feet from the impact of said target.

6. The method of claim 4, wherein said actuator has a stem member, the core particles enclose said stem member, and said projectile core particles are maintained in a substantially confined zone for a distance of up to about six feet.

7. The method of impacting a target with a projectile, said projectile comprising a absorption zone, a hull, a mass of projectile core particles within the hull and a actuator, the actuator being releasably fixed to the hull, said actuator being at the impact end of said shell and said absorption zone being upstream of said core particles, comprising the steps of

a- igniting an explosive charge thereby projecting said projectile,

b- absorbing said explosive charge impact and preventing said core particles from compressing into a unified structure,

c- maintaining said core particles contained within said hull until a target is impacted by said projectile,

d- impacting a target,

e- upon impact with said target, peeling said hull back upon itself and thereby releasing said mass of core particles from their containment within said hull.

8. The method of claim 7, further comprising the step maintaining said core particles in a substantially cohesive mass for a distance of at least about three feet, and radially dispersing substantially said entire mass of core particles at least about three feet after the impact with said target.

9. The method of claim 7, further comprising the step of producing a zone of lethal impact by maintaining said core particles in a substantially cohesive mass behind said actuator after initial impact with said target.

~~9a~~ 10. The method of claim 9, wherein said lethal zone extends at least about three feet from the point of impact with said target.

~~9b~~ 11. The method of claim ~~9a~~ 10, wherein said core particles substantially separate from and start passing said actuator after traveling at least about six feet from impact with said target.

~~10~~ 12. The method of claim 7, further comprising the step of initially maintaining said projectile core particles in a confined zone, within said confined zone said mass of projectile core particles having a lethal impact effect substantially equivalent to that of a unitary projectile, thereafter dispersing said projectile core particles in an progressively expanding pattern such that the particles travel as substantially discrete individual particles and upon impact with a secondary target produce a plurality of non-lethal individual impacts.

Rule 126

11. The method of claim 7, wherein said confined zone is up to about six feet from the impact with said target.

12. The method of claim 11, wherein said confined zone is up to about three feet from the impact with said target.

13. The method of impacting a target with a projectile, said projectile comprising a absorption zone, a hull, a mass of projectile core particles within the hull and a actuator, the actuator being releasably fixed to the hull and an actuator, said actuator being at the impact end of said shell and said absorption zone being upstream of said core particles, comprising the steps of

a- igniting an explosive charge thereby projecting said projectile,

b- absorbing said explosive charge impact and preventing said core particles from compressing into a unified structure,

c- maintaining said core particles contained within said shell until a target is impacted by said shell,

d- impacting a target,

e- upon impact with said target, releasing said mass of core particles from said hull as a cohesive group of lethal individual particles, and

f- thereafter radially dispersing substantially said entire mass of core particles to produce a mass of non-lethal individual impact particles.

14. The method of claim 13, wherein said step of releasing said mass of core particles from said hull as a cohesive group of individual particles, further comprises maintaining substantially said entire mass of core particles in a confined zone behind said actuator, said actuator being maintained in a substantially straight line trajectory by core particles that engage said actuator.

15. The method of claim 13, wherein, upon impact of said projectile with said target, the forward movement of said actuator is preceded by a shock wave, said target being initially impacted by said shock wave.

16. The method of claim 13, further comprising the step of initially maintaining said projectile core particles in a confined zone after releasing said mass of core particles from said hull as a cohesive group of individual particles, within said confined zone said mass of projectile core particles having a lethal impact effect substantially equivalent to that of a unitary projectile, thereafter dispersing said projectile core particles in an progressively expanding pattern such that the particles travel as substantially discrete individual particles and upon impact with a secondary target produce a plurality of non-lethal individual impacts.

17. The method of claim 16, wherein said confined zone is up to about six feet from the impact with said target.

18. The method of claim 17, wherein said confined zone is up to about three feet from the impact with said target.

~~19.~~ 21 The method of impacting a target with a projectile having a plurality of small particles encased in a hull, comprising the steps of:

a) separating said hull from said plurality of small particles upon impact with a target,

b) maintaining said plurality of small particles in the form of a cohesive mass of lethal particles for a distance of at least about two feet from the point of impact with said target,

c) thereafter breaking apart said cohesive mass of particles into individual non-lethal, radially dispersing particles.

~~20.~~ 22 The method of claim ~~19~~ 21 the step of initially maintaining said plurality of small particles in the form of a cohesive mass of particles provides said plurality of small particles with a lethal impact effect substantially equivalent to that of a unitary projectile.

~~21.~~ 23 The method of claim ~~19~~ 21 wherein breaking apart said cohesive mass of particles causes that particles to act as discrete individual particles and upon impact with a secondary target produce a plurality of individual non-lethal impacts.

~~22.~~ 24 The method of claim ~~21~~ 23 wherein said particles break apart and act as discrete individual non-lethal particles after traveling no greater than about ten feet from said point of impact with said target.

~~23.~~ 25 The method of claim ~~22~~ 24 wherein said particles break apart and act as discrete individual particles after traveling no greater than about six feet from said point of impact with said target.

Rule 126

24. The method of claim 23, wherein said particles break apart and act as discrete individual particles after traveling no greater than about three feet from said point of impact with said target.

25. The projectile of claim 19, wherein said hull is a cylindrical member having an open end, said actuator having an exterior side and an interior side and being releasably fixed to said hull open end to close said hull open end, whereby said actuator is released from its being releasably fixed to said hull open end upon impact with a target.

26. The projectile of claim 25, wherein said hull has an internal channel proximate its open end and said actuator has a peripheral, circular ring mounted in said hull internal channel.

27. The projectile of claim 25, wherein said actuator has a truncated conical section having tapered sides, said tapered sides having its greatest radial dimension at its exterior side.

28. The projectile of claim 27, wherein said at least one stem member is a centrally positioned cylindrical member.

29. The projectile of claim 26, wherein said actuator has a truncated conical section having tapered sides, said tapered sides having its greatest radial dimension at its exterior side, and said circular ring being on the interior side of said truncated conical section of said actuator.

30- A method of controlling the release of energy from a projectile upon impact, comprising the steps of controlling the expansion of the projectile by;

a- converting said projectile upon an initial impact from a unitary structure to an expanding body of individual particles,

b- maintaining said individual particles as a unitary mass of particles for a predetermined first distance, and thereafter,

c- dispersing said unitary mass of particles into discrete particles non-lethal particles.

31- The method of claim 30 wherein said mass of unitary particles initially function as a slug in step (a) then in step (b) acts like a slug of substantially increased diameter and in step (c) disperse and are non-lethal discrete particles.

32- The method of claim 31, wherein step (c) occurs to a distance of about three feet and preferably within ten feet from initial impact.

34- The method of claim 30, wherein said controlling of the expansion of said mass of unitary particles into discrete particles projectile comprises the steps of confining said particles in a hull, tearing said hull away from the particles at a predetermined rate, thus producing a predetermined rate of expansion of said particles immediately subsequent to said initial impact.

35- The method of claim 34, wherein said hull is peeled back upon itself as a result of the contact of said hull with an object.

36- The method of claim 35, wherein said peel back of said hull is controlled so as to release said particles within, on the order of about one thousandth of a second.

37- The method of claim 34, further comprising maintaining said unitary particles substantially confined by a substantially planar member for up to at least about one foot of travel after initial impact.